ABSTRACT

[0035] A system and method is provided for classifying voxels of first and second images generated using first and second echoes of a dual MRI scan, the first and second echoes corresponding to respective first and second sets of image acquisition parameters. The method includes the steps of providing for accessing first image data corresponding to the first image including an array of voxels, the first image data including a first associated parameter value S1 for a parameter of the imaging associated with respective voxels of the array of voxels; providing for accessing second image data corresponding to the second image including the array of voxels, the second image data including a second associated parameter value S2 for the parameter of the imaging associated with respective voxels of the array of voxels; and providing for determining R and θ values associated with respective voxels of the array of voxels, wherein for each respective voxel R substantially equals $(S1^2 + S2^2)^{1/2}$, and θ substantially equals arctan(S1/S2) for S1 and S2 associated with the respective voxel.